

NCS4333

Operational Amplifier, 30 μV Offset, 0.07 $\mu\text{V}/^\circ\text{C}$, Low Power, Zero-Drift

Product Overview

For complete documentation, see the data sheet.

The NCS333 family of high precision op amps feature very low input offset voltage and near-zero drift over time and temperature. These low quiescent current amplifiers have high impedance inputs with a common-mode range 100 mV beyond the rails as well as rail-to-rail output swing within 50 mV of the rails. These op amps operate over a wide supply range from 1.8 V to 5.5 V. The NCS333 family exhibits outstanding CMRR without the crossover associated with traditional complementary input stages. The NCS333, as well as the dual version, NCS2333, and the quad version, NCS4333, come in a variety of packages and pinouts. Automotive qualified options are available under NCV prefix.

Product Family:

	NCS333	NCS2333	NCS4333
Channel	1	2	4
Packages	SOT23-5, SC-70-5	SOIC-8, Micro-8, UDFN-8	TSSOP-14, SOIC-14

Features

- Low Offset Voltage: 30 μV max for NCS4333
- Zero Drift: 0.07 $\mu\text{V}/^\circ\text{C}$ max
- Quiescent Current per Channel: 17 μA Typical at 3.3 V Supply
- Low Noise: 1.1 μVpp , 0.1 Hz to 10 Hz
- Supply Voltage: 1.8 V to 5.5 V
- Rail-to-Rail Input and Output

Applications

- Temperature Measurements
- Transducer Applications
- Current Sensing





Benefits

- High Precision
- Higher Accuracy
- Low Power Consumption

End Products

- Battery Powered Instruments
- Electronic Scales
- Medical Instrumentation

Part Electrical Specifications

Product	Pricing (\$/Unit)	Compliance	Status	Rail to Rail	Channels	V _s Min (V)	V _s Max (V)	I _a Typ (mA)	V _{os} Max (mV)	GBW Typ (MHz)	SR Typ (V/μs)	I _o Typ (mA)	ΔV _{os} /ΔT (μV/°C)	e _N (nV/√Hz)	I _{bias} Typ (pA)	CMRR Typ (dB)	Architecture	Temperature Range (°C)	Package Type
NCS4333DR2G	0.7084		Active	Input/Output	4	1.8	5.5	0.021		0.35	0.15	11	0.095	62	60	123	CMOS	-40 to 125	SOIC-14
NCS4333DTBR2G	0.44		Active	Input/Output	4	1.8	5.5	0.021		0.35	0.15	11	0.095	62	60	123	CMOS	-40 to 125	TSOP-14
NCV4333DR2G	0.638		Active	Input/Output	4	1.8	5.5	0.021		0.35	0.15	11	0.095	62	60	123	CMOS	-40 to 125	SOIC-14
NCV4333DTBR2G	0.49		Active	Input/Output	4	1.8	5.5	0.021		0.35	0.15	11	0.095	62	60	123	CMOS	-40 to 125	TSOP-14